

5    What is claimed is:

1.    A workover system for a subsea horizontal tree wherein a subsea drilling BOP is not utilized and a riser extends from the subsea horizontal tree towards the surface, the subsea horizontal tree comprising a tubing hanger, the  
10    tubing hanger supporting a production tubing string in a well, the well further comprising a casing string with an annulus defined between the casing string and the tubing string, the workover system comprising:

an adapter for connecting the riser with the subsea horizontal tree;

an annulus line for communication with the annulus;

15    a lower end of the annulus line being connected to a port leading into the subsea horizontal tree for communication with the annulus; and

at least one valve mounted between the lower end of the annulus line and the annulus for controlling fluid flow between the annulus line and the annulus, the at least one valve being mounted in at least one of either a position external  
20    to the subsea horizontal tree or a position within the tubing hanger.

2.    The system as defined in Claim 1, further comprising:

a receptacle mounted externally to the subsea horizontal tree for receiving and guiding a lower end of the annulus line into fluid communication with the  
25    port, the at least one valve being mounted adjacent to the receptacle.

3.    A system as defined in Claim 1, further comprising:

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a tree cap, and

an insertable isolation sleeve insertable through the tree cap, the isolation sleeve having an end for sealing engagement with the tubing hanger.

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4. The system as defined in claim 3, wherein the port is spaced axially above the tree cap and communicates with the annulus along a flow path adjacent to the insertable isolation sleeve through the tree cap.

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5. The system as defined in claim 1, wherein the port is defined within the adapter.

6. The system as defined in claim 1, further comprising a tree cap, and wherein the port is defined between the tree cap and the tubing hanger.

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7. The system as defined claim 1, wherein the port is defined below the tubing hanger.

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8. The system as defined in Claim 1, further comprising a tree cap, the tree cap and the tubing hanger being formed as separate components axially spaced apart with respect to each other.

9. A system as defined in Claim 1, further comprising:  
the tubing hanger defining a tubing hanger central bore therethrough in

5 communication with the production tubing string, the tubing hanger also defining a substantially straight vertical flow path which is radially offset from the tubing hanger central bore, and the at least one valve is positioned along the vertical flow path for controlling fluid flow between the annulus line and the annulus.

10 10. A workover system for a subsea horizontal tree wherein a subsea drilling BOP is not utilized and a riser extends from the subsea horizontal tree towards the surface, the subsea horizontal tree comprising a tubing hanger, the tubing hanger supporting a production tubing string in a well, the well further comprising a casing string with an annulus defined between the casing string  
15 and the tubing string, the workover system comprising:

an adapter for connecting the riser with the subsea horizontal tree;

a tree cap defining a central tree cap bore therethrough;

an annulus line for communication with the annulus;

the annulus line being connected to a port for communication with the

20 annulus; and

an insertable isolation sleeve insertable through the tree cap central bore,

the isolation sleeve having an end thereof for sealing engagement with the tubing hanger.

25 11. The system as defined in claim 10, wherein the isolation sleeve seals with the adapter.

5           12.     The system as defined in claim 10, wherein the isolation sleeve  
does not seal with the tree cap central bore.

          13.     The system as defined in claim 10, wherein the isolation sleeve  
seals with the tree cap central bore.

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          14.     The system as defined in claim 10, wherein the port is defined  
within the adapter.

          15.     The system as defined in 10, wherein the port is defined between  
15 the tree cap and the tubing hanger.

          16.     The system as defined claim 10, wherein the port is defined below  
the tubing hanger.

20           17.     The system as defined Claim 10, wherein the insertable isolation  
sleeve insertable through the tree cap central bore is available but is not utilized  
or has been removed.

          18.     A workover system for a subsea horizontal tree wherein a subsea  
25 drilling BOP is not utilized and a riser extends from the subsea horizontal tree  
towards the surface, the subsea horizontal tree comprising a tubing hanger, the  
tubing hanger supporting a production tubing string in a well, the well further

5 comprising a casing string, the casing string and production tubing defining an annulus therebetween, the system comprising:

an adapter for connecting the riser with the subsea horizontal tree;

a tree cap defining a central tree cap bore therethrough;

an annulus line for communication with the annulus; and

10 the annulus line being connected to a port for communication with the annulus between the casing string and the production tubing string, the port being formed at a position below the tree cap.

19. The workover system of claim 18, wherein the port is defined below  
15 the tubing hanger.

20. A system as defined in Claim 18, further comprising:

an insertable isolation sleeve insertable through the tree cap, the isolation sleeve having an end for sealing engagement with the tubing hanger.

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21. The system of claim 18, further comprising a centrally positioned tubing hanger flow passageway, and a vertically extending flow passageway in the tubing hanger radially spaced from the tubing hanger flow passageway and in communication with the annulus and the port.

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22. The system as defined in Claim 18, further comprising a tree cap, the tree cap and the tubing hanger being formed as separate components axially

5 spaced apart with respect to each other.

23. A workover system for a subsea horizontal tree wherein a subsea drilling BOP is not utilized, the subsea horizontal tree comprising a tubing hanger, the tubing hanger supporting a production tubing string in a well, the well  
10 further comprising a casing string with an annulus defined between the casing string and the tubing string, the workover system comprising:

an annulus line for communication with the annulus;

a lower end of the annulus line being connected to a port leading into the subsea horizontal tree for communication with the annulus; and

15 at least one valve mounted between the lower end of the annulus line and the annulus for controlling fluid flow between the annulus line and the annulus, the at least one valve being mounted in at least one of either a position external to the subsea horizontal tree or a position within the tubing hanger; and

a riser which extends towards the surface from the subsea horizontal tree,  
20 the riser comprising a smaller internal diameter than an outer diameter of the tubing hanger.

23. The system as defined in Claim 22, further comprising a tree cap, the tree cap and the tubing hanger being formed as separate components axially  
25 spaced apart with respect to each other.